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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,353

01/12/2006

Yukio Umemura

062709-0160

9085

22428 7590 03/17/2009

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EXAMINER

ALTUN, NURI B

ART UNIT

PAPER NUMBER

3657

MAIL DATE

DELIVERY MODE

03/17/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/564,353	<b>Applicant(s)</b> UMEMURA, YUKIO	
	<b>Examiner</b> NURI ALTUN	<b>Art Unit</b> 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 2-10 and 12-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 11, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

Amendment received on 12/19/2008 has been acknowledged.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **1, 11, 17 and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kurosu (JPO 2003-139161)**.

**As per claim 1**, Kurosu teaches a power transmission device comprising:

a first transmission member (7) rotatably attached at a boss portion of a housing of a compressor; a second transmission member (1) fixed to an end portion of a rotary shaft passing loosely through the boss portion (see Fig. 1);

a first pin (5) mounted on one of the first transmission member and the second transmission member; a second pin (9) mounted on the other of the first transmission member and the second transmission member; and

a coupling member (11) coupling the first pin with the second pin to transmit power from the first transmission member to the second transmission member (see Fig. 1) and cutting off the power transmission when a torque load applied to the first pin exceeds a given value (paragraph 0020),

wherein the coupling member comprises:

a pair of sidepiece portions disposed parallel to each other (see Fig. A below);

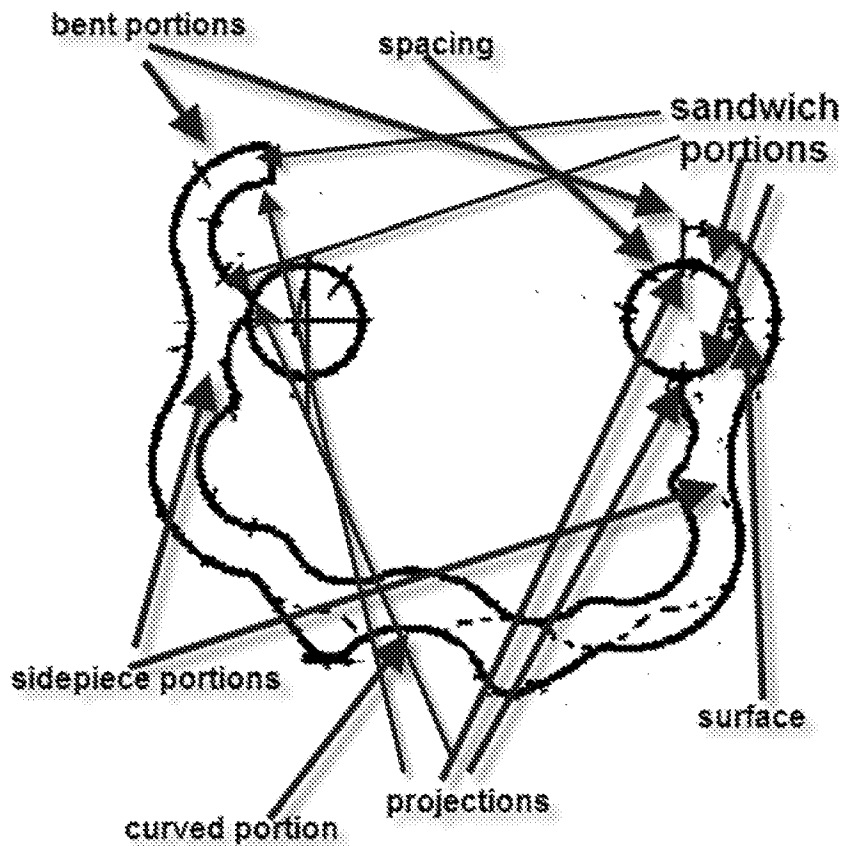


Fig. A

a pair of bent portions having free ends, basic ends joined integrally to first ends of the sidepiece portions respectively and sandwich portions sandwiching the pins, wherein each of the sandwich portions comprises:

two projections disposed at regular intervals one another in a circumferential direction of the first pin and contacted with the outside circumferential surface of the pins; and one surface disposed between the adjacent projections and opposed to the outside circumferential surface of the first pin at a regular distance (See Fig. A above); and

a curved portion having both ends joined integrally to second ends of the sidepiece portions respectively (see Fig. A) and

a hole (10) through and into which the second pin (9) is passed and fitted (see figure 1),

wherein the pins are sandwiched between the sandwich portions by inserting the pins into a spacing between the sidepiece portions (see Fig. A) and then pressing the pins toward the bent portion side to deform the bent portions in a direction away from each other (paragraph 0014 and also it is inherent that when the pin is inserted, it will move the bent portion away from the other bent portion) and

wherein the pin is released from the coupling member when the torque load applied to the pin exceeds a given value (see Fig. 5 and paragraphs 0004 and 0020).

Kurosu doesn't explicitly disclose one pin sandwiched by the sandwiching member, however it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the pins (5 or 6) of Kurosu to be an integral pin structure in order to simplify the structure.

**As per claim 11**, Kurosu teaches an inside surface of at least one of the sidepiece portions is smoothly joined to a projection located on the basic end side of the bent portion (see Fig. A above).

**As per claim 17**, Kurosu teaches a method for manufacturing a power transmission device, comprising the steps of:

fitting a second pin (9) into a hole of a coupling member (11) wherein the second pin is mounted on one of a first transmission member and a second transmission member (see Fig. 1);

inserting a first pin (5; 6) into a spacing of the coupling member wherein the first pin is mounted on the other of the first transmission member (7) and the second transmission member (1) ;

fastening the transmission member on which the second pin is mounted (see paragraphs 0013, 0015 and 0019) ; and

sandwiching the pins between sandwich portions of the coupling member by rotating the transmission member on which the pins are mounted to move the pins toward an open end side of the spacing. (see Fig. A and paragraph 0014; since coupling member forms a curve projecting radially outwardly of the first transmission member, it is construed that first pin is sandwiched and transmission member is rotated and formed a curve to move the first pin toward an open end on the first transmission member side)

Kurosu doesn't explicitly disclose one pin sandwiched by the sandwiching member, however it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the pins (5 or 6) of Kurosu to be an integral pin structure in order to simplify the structure.

**As per claim 18**, Kurosu teaches a compressor comprising:

a housing ; a boss portion (1a) formed at an end portion of the housing;

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a rotary shaft passing loosely through the boss portion; and a power transmission device transmitting driving force of an engine to the rotary shaft (see Figs. 1 and 2), wherein the power transmission device comprising:

- a first transmission member (7) rotatably attached at the boss portion;

- a second transmission member (1) fixed to an end portion of the rotary shaft;

- a first pin (5) mounted on one of the first transmission member and the second transmission member; a second pin (9) mounted on the other of the first transmission member and the second transmission member; and a coupling member (11) coupling the first pin with the second pin to transmit power from the first transmission member to the second transmission member (see Fig. 1) and

cutting off the power transmission when a torque load applied to the first pin exceeds a given value (paragraph 0020), wherein the coupling member comprises:

- a pair of sidepiece portions disposed parallel to each other (see Fig. A below);

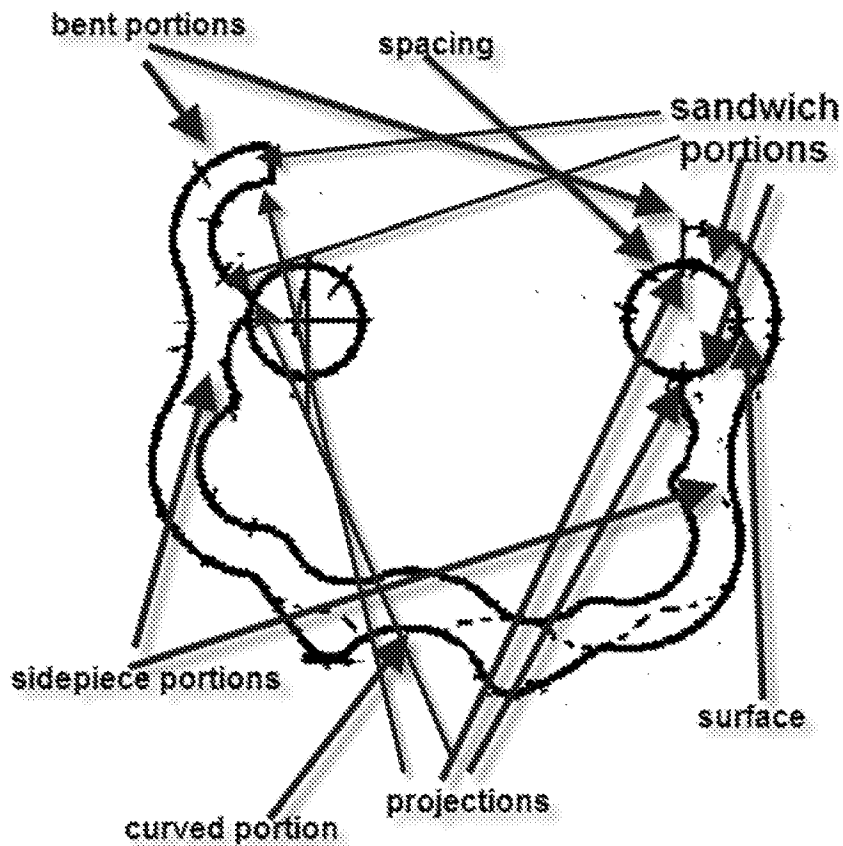


Fig. A

a pair of bent portions respectively having free ends, basic ends joined integrally to first ends of the sidepiece portions respectively and sandwich portions sandwiching the pins, wherein each of the sandwich portions comprises:

two projections disposed at regular intervals one another in a circumferential direction of the first pin and contacted with the outside circumferential surface of the pins; and one surface disposed between the adjacent projections and opposed to the outside circumferential surface of the first pin at a regular distance (See Fig. A above); and



a curved portion having both ends joined integrally to second ends of the sidepiece portions respectively (see Fig. A) and

a hole (10) through and into which the second pin (9) is passed and fitted (see figure 1),

wherein the pins are sandwiched between the sandwich portions by inserting the pins into a spacing between the sidepiece portions (see Fig. A) and then pressing the pins toward the bent portion side to deform the bent portions in a direction away from each other (paragraph 0014 and also it is inherent that when the pin is inserted, it will move the bent portion away from the other bent portion) and

wherein the pin is released from the coupling member when the torque load applied to the pin exceeds a given value (see Fig. 5 and paragraphs 0004 and 0020).

Kurosu doesn't explicitly disclose one pin sandwiched by the sandwiching member, however it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the pins (5 or 6) of Kurosu to be an integral pin structure in order to simplify the structure.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 11, 17 and 18 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The reference Kawachi (6,500,085) teaches a mechanical device for transmitting power with similar features.

The reference Kurosu (JPO 2003-028191) teaches a power transmitting mechanism with sandwiching feature.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NURI ALTUN whose telephone number is (571)270-5807. The examiner can normally be reached on Mon-Fri 7:30 - 5:00 with first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272 7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bradley T King/  
Primary Examiner, Art Unit 3657

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